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UNITED STATES DISTRICT COURT
NORTHERN DISTRICT OF CALIFORNIA
SAN JOSE DIVISION

IN RE: HIGH-TECH EMPLOYEE
ANTITRUST LITIGATION

THIS DOCUMENT RELATES TO:

ALL ACTIONS

Master Docket No. 11-CV-2509-LHK

**PLAINTIFFS' SUPPLEMENTAL MOTION
AND BRIEF IN SUPPORT OF CLASS
CERTIFICATION**

Date: August 8, 2013
Time: 1:30 pm
Courtroom: 8, 4th Floor
Judge: Honorable Lucy H. Koh

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SUPPLEMENTAL MOTION FOR CLASS CERTIFICATION

Plaintiffs bring this Supplemental Motion for Class Certification to address questions posed by the Court with respect to class certification in the Court's April 5, 2013 Order. (Dkt. 382) (Order). While Plaintiffs respectfully submit the evidence supports certification of either the class of all-salaried employees or the class of technical, creative, and research and development employees ("Technical Class") previously proposed by Plaintiffs, there is powerful evidence that the no-cold calling agreements at issue in this case were designed substantially to disrupt recruiting of Technical Class employees. Accordingly, Plaintiffs have focused their supplemental briefing and analysis on demonstrating impact to all or nearly all of the Technical Class. Plaintiffs hereby adopt and amend their prior request for certification of the Technical Class as set forth originally in Plaintiffs' October 1, 2012 Motion for Class Certification (Dkt. 187), and consisting of job titles identified in Appendix B to the Report of Edward Leamer dated October 1, 2012 (Dkt. 190), as follows:

All natural persons who work in the technical, creative, and/or research and development fields that are employed on a salaried basis in the United States by one or more of the following: (a) Apple from March 2005 through December 2009; (b) Adobe from May 2005 through December 2009; (c) Google from March 2005 through December 2009; (d) Intel from March 2005 through December 2009; (e) Intuit from June 2007 through December 2009; (f) Lucasfilm from January 2005 through December 2009; or (g) Pixar from January 2005 through December 2009. Excluded from the Class are: retail employees; corporate officers, members of the boards of directors, and senior executives of all Defendants.

This amended motion is based on this supplemental memorandum, the Report of Dr. Kevin F. Hallock, the Supplemental Report of Dr. Edward E. Leamer, the Declarations of Dean M. Harvey and Lisa J. Cisneros, all exhibits and appendices to such documents, the pleadings and other documents on file in this consolidated action (including all pleadings and other documents Plaintiffs previously filed in connection with Plaintiffs' October 1, 2012 Motion for Class Certification, and Plaintiffs' December 10, 2012 Consolidated Reply in Support of Class Certification and Opposition to Defendants' Motion to Strike), and any oral argument that has been or may be presented to the Court.

STATEMENT OF ISSUES TO BE DECIDED

The issues to be decided are:

1. Whether pay suppression resulting from Defendants’ anti-solicitation agreements would have impacted all or nearly all members of the Technical Class;
2. Whether the Court should appoint Plaintiffs as Class representatives; and
3. Whether “a class action is superior to other available methods for the fair and efficient adjudication of the controversy.”

MEMORANDUM OF POINTS AND AUTHORITIES

“So it messes up the pay structure. It does. It makes it very high. . . . That’s just the reality we’ve got. And I do feel strongly about it.”

Deposition of Ed Catmull, President of Pixar,
January 24, 2013 (179:17-25)¹

I. Introduction

The Court previously held that Plaintiffs satisfied Fed. R. Civ. Proc. 23(a) and 23(b)(3) as to conspiracy and damages. April 5, 2013 Order at 45 (Dkt. 382) (Order). The remaining open question posed by the Court under Rule 23(b)(3) is whether “the evidence will be able to show that Defendants maintained such rigid compensation structures that a suppression of wages to some employees would have affected all or nearly all Class members.” *Id.* Discovery taken since the hearing answers this question in the affirmative: Defendants’ own top executives acknowledge the importance of pay structures at their firms and the ability of competition to ratchet them up—and the importance of the no cold-calling agreements (“agreements”) in keeping them down. This purpose was manifest from the beginning, in the Pixar-Lucasfilm agreement that started it all: to suppress their employees’ compensation and mobility by eliminating competitive solicitations. *See* Catmull, *supra*. Mr. Jobs, who was “very adamant about protecting his employee force,” Catmull 195:18-21, proceeded to expand the agreements to include Apple and its labor competitors, as set forth below and in Plaintiffs’ original motion. Defendants’ CEOs’ own admissions provide the missing puzzle piece the Court seeks. *See* Lucas 194:17-20 (“And the only way we can survive is if we do it together. United we stand, divided we fall. This is not like a regular capitalist kind of operation where you’re out to kill the other guy.”). Catmull 172:23-173:8 (“[T]hey would bring in people, they would pay higher salaries, it would be disruptive I was trying to prevent that from happening.”). When Google found itself the target of a new rising competitor, Facebook, Google resorted to the same unlawful tactic: seeking a “truce.” When Facebook refused, Google increased pay company-wide. *See*

¹ Deposition excerpts and exhibits are attached to the accompanying Declaration of Lisa J. Cisneros. Deposition testimony is cited in the brief by last name of deponent, with exhibits referenced as “Ex.” All other business records cited herein are attached to the Declaration of Dean M. Harvey, organized in numerical order by defendant.

1 Part III.A., *infra*.

2 Further discovery confirms that while these agreements affected all of Defendants’
 3 employees, they particularly targeted their technical and creative talent. Plaintiffs therefore
 4 request certification of a class of salaried technical, creative, and research and development
 5 employees (“Technical Class”) who worked for a Defendant while that Defendant participated in
 6 at least one anti-solicitation agreement with another Defendant. Plaintiffs bring before the Court
 7 a proposed Class comprising those technical employees whose work contributed to Defendants’
 8 core business functions, whom the Defendants heavily recruited and jealously guarded, and who
 9 appear at the very crux of Defendants’ conspiracy and this case. *See* Part III.B., *infra*. In
 10 addition, the composition of the Technical Class has been reviewed by Professor Kevin F.
 11 Hallock of Cornell University. Dr. Hallock is the Donald C. Opatrny ‘74 Chair of the Department
 12 of Economics, Joseph R. Rich ‘80 Professor, Professor of Economics, Professor of Human
 13 Resource Studies, and Director of the Cornell Institute for Compensation Studies. He is a leading
 14 labor economist and an expert in compensation structure and design. Dr. Hallock confirms that
 15 the titles selected for inclusion in the proposed Class are appropriate based on Defendants’ formal
 16 and structured compensation systems and Defendants’ own job families for their technical
 17 workers. Hallock ¶¶ 241-244.

18 Dr. Hallock investigated whether Defendants used formal administrative pay systems, and
 19 whether the anti-solicitation agreements at issue would have suppressed the compensation of all
 20 or nearly all members of the Technical Class. Dr. Hallock reviewed only common evidence:
 21 Defendants’ testimony, and Defendants’ contemporaneous documents and data.

22 Dr. Hallock finds that Defendants all used formalized compensation systems that
 23 organized employees into a single pay structure. Defendants sorted their employees into job
 24 families, with pay bands and zones or grades and ranges. An important feature of these formal
 25 systems is that certain job titles, levels, etc., are valued relative to all other employee categories in
 26 the company. Employees who receive compensation outside of their guideline ranges are
 27 identified, e.g., “red flagged” (Arriada-Keiper (Adobe) 24:8-9), and corrected to bring them in
 28 line with the company structure. Defendants used their compensation systems to pay their

1 employees in systematic and structured ways. Nearly all compensation decisions are made
2 company-wide on an annual basis and in a fashion that preserves existing compensation
3 relationships. When Defendants make “out of cycle” adjustments to retain certain employees
4 (such as to make counteroffers or pay retention bonuses in light of a competitor’s solicitation),
5 Defendants are careful to adjust the system to take the exceptions into account. Third,
6 Defendants adhered to principles of internal equity whereby similarly-situated and similarly-
7 performing employees were paid similarly. Dr. Hallock also examines Defendants’ pay
8 structures as they pertain to the Technical Class, and concludes that the same mechanisms that
9 would have transmitted pay suppression throughout the firm apply with even greater force to
10 technical employees. Thus, if the anti-solicitation agreements suppressed the pay of certain
11 members of the Technical Class, all or nearly all other members would be expected to have also
12 been impacted. *See* Part III.C., *infra*.

13 Finally, Plaintiffs have also asked Dr. Leamer to address the Court’s questions about his
14 prior analysis. Dr. Leamer submits a correlation analysis to address the precise question raised by
15 the Court: whether the compensation of all Class members tended to “move together through
16 time” during the period under study. The correlation analysis, conducted on a title-by-title basis,
17 shows that over time the compensation of individual job titles correlated to the average
18 compensation of other technical and creative employees at the same firm. Dr. Leamer has also
19 addressed the Court’s question about the significance of internal forces, by statistically
20 demonstrating the existence of sharing relationships among different groups of Defendant
21 employees. Dr. Leamer has estimated two regressions to measure the relationship of
22 compensation of different job titles, both contemporaneously and over time. He shows that gains
23 tend to be shared, both at the same time as well as in the following year. This sharing of gains
24 over time further supports an inference of a rigid salary structure. He also demonstrates the much
25 stronger relationship between pay of different groups at a firm than between firms.

26 Plaintiffs respectfully request that the Court find class proceedings to be superior to
27 individual proceedings, appoint Plaintiffs as class representatives, and grant the motion.
28

II. Legal Standards

The Supreme Court in *Amgen Inc. v. Connecticut Retirement Plans and Trust Funds*, --- U.S.---, 133 S. Ct. 1184 (2013), clarified the degree to which a district court should address the merits of a case when deciding whether common issues predominate under Rule 23(b)(3). The Supreme Court rejected the notion that a district court can or should “engage in free-ranging merits inquiries at the certification stage.” *Id.* at 1194-95. The Court explained that the purpose of examining common evidence is to evaluate the risk that should that evidence fail the court will be inundated with individualized questions. *Id.* at 1196 (“...there is no risk whatever that a failure of proof on the common question of materiality will result in individual questions predominating.”). In other words, a court should consider under Rule 23 the consequences for the evidence of a failure of the proposed class-wide proof; where a decision on the merits against the class promises to bring the case to an end, then a court need not reach that decision at the class certification stage to find predominance. *Id.* Rejecting the contrary view of the dissenters, the Court held expressly:

Rule 23(b)(3), however, does *not* require a plaintiff seeking class certification to prove that each “elemen[t] of [her] claim [is] susceptible to classwide proof.” *Post*, at 7. What the rule does require is that common questions “*predominate* over any questions affecting only individual [class] members.” Fed. Rule Civ. Proc. 23(b)(3).

Id. at 1196 (emphasis and alterations in original).²

Comcast Corp. v. Behrend, 569 U.S.---, 133 S. Ct. 1426 (2013) follows *Amgen*’s rule. The *Comcast* plaintiffs alleged that multiple dissimilar monopolistic acts allowed Comcast to raise rates on over 2 million cable subscribers across 16 counties in 3 states. *Id.* at 1430 or 1435.

² The Ninth Circuit has yet to address *Amgen* and, apart from this Court’s prior order regarding class certification, no district court decision offers a detailed, substantive analysis of the case. *See e.g., Saucedo v. NW Mgmt. & Realty Servs.*, 2013 U.S. Dist. LEXIS 27858 (E.D. Wash. Feb. 27, 2013). The Fifth Circuit, however, closely analyzed *Amgen* and applied its principles in *Erica P. John Fund, Inc. v. Halliburton Co.*, 2013 U.S. App. LEXIS 8933 (5th Cir. April 30, 2013), affirming class certification. There, the Fifth Circuit held that, at the class certification stage, it is improper to determine the absence of price impact and weigh the defendant’s rebuttal evidence because resolving the question in favor of the defendant would preclude plaintiffs from establishing an essential element of their securities claim and would effectively end the case. *Id.* at *25-29.

On the theories of harm articulated in that case, the Supreme Court held that the proposed damages methodology failed to satisfy Rule 23(b)(3) because “Questions of individual damage calculations will inevitably overwhelm questions common to the class.” *Id.* at 1433. This case-specific finding followed from the fact that some theories of harm themselves were susceptible to class-wide proof while others were individualized. According to the Court, *Comcast* broke no new ground. *Id.* at 1433 (“This case thus turns on the straightforward application of class-certification principles; it provides no occasion for the dissent’s extended discussion, *post*, at 5–11 (GINSBURG and BREYER, JJ., dissenting), of substantive antitrust law.”).³

III. Defendants’ Conspiracy Commonly Impacted All or Nearly All Class Members, Satisfying Rule 23(b)(3)

The only available theory of harm to the Technical Class—that the agreements suppressed compensation on a company-wide or nearly company-wide basis—is by definition only provable on a class basis. Defendants have never identified a specific “individualized” question of impact that will be raised should this common proof fail. Plaintiffs meet the standards articulated in *Amgen* and *Comcast* for the simple reason that if Plaintiffs’ proposed proof of class-wide impact fails, the consequence will be that the case is over. Or, to borrow from *Amgen*, plaintiffs’

failure to present sufficient evidence of [class-wide wage suppression] to defeat a summary-judgment motion or to prevail at trial would not cause individual [impact] questions to overwhelm the questions common to the class. Instead, the failure of proof on

³ No Ninth Circuit opinion has applied *Comcast*, but cases in the Northern District have cited it. The most relevant, substantive discussion is found in *In re Diamond Foods, Inc.*, 2013 U.S. Dist. LEXIS 64464, *34–36 (May 6, 2013) (Alsup, J.), where the court considered *Comcast* prior to granting class certification in a securities case. The court recited established law stating that “[t]he amount of damages is invariably an individual question and does not defeat class action treatment.” *Id.* at *36 (citing *Blackie v. Barrack*, 524 F.2d 891, 905 (9th Cir. 1975)). The court then held that the plaintiff “has sufficiently shown that damages [we]re capable of measurement on a classwide basis such that individual damage calculations d[id] not threaten to overwhelm questions common to the class.” *Id.* at *37. See also *Martins v. 3PD, Inc.*, 2013 U.S. Dist. LEXIS 45753, *21 n.3 (D. Mass. March 28, 2013) (noting that in *Comcast* the parties did not dispute, and the court assumed, certain key issues and, thus, the decision did not overturn existing case law that common questions of liability can predominate even if some individual damages issues remain); *In re Motor Fuel Temperature Sales Practices Litig.*, 2013 U.S. Dist. LEXIS 50667 (D. Kan. April 5, 2013) (stating that “[t]he possibility that individual issues may predominate the issue of damages . . . does not defeat class certification by making [the liability] aspect of the case unmanageable”) (quoting *In re Urethane Antitrust Litig.*, 251 F.R.D. 629, 633, 639 (D. Kan. July 28, 2008)) (alterations in original).

1 the element of [class-wide wage suppression] would end the case
2 for one and for all.

3 *Amgen*, 133 S. Ct. at 1196. Discovery taken since the hearing re-confirms that the impact of the
4 unlawful agreements is a common question that will be proved using common evidence.

5 **A. The Anti-Solicitation Agreements Suppressed Compensation Across the Class**
6 **Systematically, By Design**

7 The Court earlier found that “the adjudication of Defendants’ alleged antitrust violation
8 will turn on overwhelmingly common legal and factual issues.” Order at 13. Subsequent
9 discovery has confirmed that the common evidence regarding Defendants’ violation also
10 demonstrates antitrust impact: the purpose and effect of the violation was to suppress
11 systematically the compensation of Defendants’ employees.

12 The roots of Defendants’ conspiracy reach back to the mid 1980’s, shortly after George
13 Lucas sold Lucasfilm’s “computer division,” a “tech, research, and development company” to
14 Steve Jobs. Lucas 16:15-17, 59:9; Catmull 78:22-79:16. That company became Pixar.

15 George Lucas “had a sort of unusual view of things,” Catmull 32:22-23, specifically that
16 companies should not compete against each other for employees: “It’s not a normal industrial
17 competitive situation.” Lucas 52:5-6. Mr. Lucas explained: “Well, I always -- the rule we had, or
18 the rule that I put down for everybody,” was that “we cannot get into a bidding war with other
19 companies because we don’t have the margins for that sort of thing.” Lucas 44:18-25. Mr. Lucas
20 agreed with Ed Catmull that Pixar would reciprocate this “rule.” From the mid 1980’s, and at
21 least until the DOJ investigation, Lucasfilm and Pixar employees were “hands off to each other in
22 terms of soliciting talent.” Lucas 96:19-25. *See also* J. Morris 165:13-16 (“we had an agreement
23 for a long period of time that we wouldn’t recruit from each other, and we are not doing that
24 anymore. We rescinded that agreement.”), 103-19-25 (“reason is there was a consent decree.”).

25 Anti-solicitation agreements particularly matter in the case of new or growing
26 competitors, who would otherwise “go out and raid all the other companies. It’s a big problem.
27 And they will pay whatever it takes . . .” Lucas 184:13-16. “[I]n those situations we have a key
28 person who you have to have to keep going who is being wooed away by another company who

1 is going to pay triple what they are getting, or in this case even 30 percent is a lot, and, you know,
 2 you want to try to keep that in check.” Lucas 186:11-15. *See also* Catmull 96:22-24 (“[W]hen
 3 the companies start these aggressive moves toward each other, then disasters happen.”). Anti-
 4 solicitation agreements keep competitive pressure in check. Lucas 187:4-6. *See also* Lucas
 5 67:12-15 (“Q: Did you discuss with Ed Catmull the subject of your interest in avoiding bidding
 6 wars between the two companies? A: well, no, but that was implied.”), 62:9-11 (“we shouldn’t
 7 get into a competitive situation where we’re trying to put each other out of business.”), 92:12-13
 8 (“the part of the agreement is not to solicit each other’s employees, is the crux of it.”); Catmull
 9 100:20-21 (“we were trying not to get into systematic raiding”), 167:16-22 (anti-solicitation
 10 agreements avoid bidding wars).

11 Ed Catmull admitted that anti-solicitation agreements suppress employee compensation
 12 systematically, by design. Without them, growing companies “would go out and they would offer
 13 much higher salaries to everybody they could[.] . . . I was trying to prevent that from
 14 happening.” Catmull 172:24-173:8. A single company soliciting employees can result in a
 15 “billion dollar disaster.” Catmull 174:18. “So I’m sorry but -- while I have responsibility for the
 16 payroll, I have responsibility for the long-term also. I don’t apologize for this. This was bad
 17 stuff. Did not belong in this industry.” Catmull 174:7-10. “The -- for me I just -- it means the
 18 pay. All right? If the pay goes way up in an industry where the margins are practically non-
 19 existent, it will have a negative effect.” Catmull 184:25-185:4.⁴

20 Ed Catmull explained the purpose and effects of anti-solicitation agreements to Steve
 21 Jobs, who expanded the agreements to the remaining Defendants. “I don’t remember any
 22 particular conversation. But he knew and understood -- what we were trying to do with the
 23 Northern California community.” Catmull 61:13-19. *See also* Catmull 71:4-9, 94:7-96:25, and
 24 Ex. 421. Jobs “was very adamant about protecting his employee force. I mean, he was trying to
 25 develop tech talent, and he did want to keep -- I knew that.” Catmull 195:18-21. Indeed, Pixar

26 ⁴ It should be noted that these “practically non-existent” margins were sufficient to make George
 27 Lucas and Steve Jobs two of the wealthiest billionaires in the United States. In December 2012,
 28 Mr. Lucas sold Lucasfilm to Disney for approximately \$4 billion. In 2006, Disney purchased
 Pixar for approximately \$7.4 billion, making Mr. Jobs Disney’s single largest shareholder.

1 could not make an offer to an Apple employee without Steve Jobs' permission. Catmull 140:6-
 2 142:13 and Exs. 369 and 424; Zissimos (Pixar) 128:20-23 ("in order to make an offer to an Apple
 3 employee, it would have to go through Steve."). The anti-solicitation agreement between Apple
 4 and Pixar was modeled expressly on the one between Pixar and Lucasfilm. Ex. 139 ("effective
 5 now, we'll follow a gentleman's agreement with Apple that is similar to our Lucasfilm
 6 agreement.").

7 Steve Jobs expanded the network of agreements, using intimidation, anger, and threats.
 8 Mr. Jobs "generally exhibited an irate, difficult, ornery, and petulant behavior" in his business
 9 dealings (Rosenberg (Google) 87:5-9), and competition for employees was no exception. "I think
 10 Mr. Jobs' view was that people shouldn't piss him off. And I think that things that pissed him off
 11 were -- would be hiring, you know -- whatever." Brin (Google) 112:21-24. His tactics included
 12 threatening patent litigation. *See* Decl. of Edward Colligan (Dkt. 293) (regarding threats to
 13 Palm). "I'm sure there were various bad things he could do if he was angry." Brin 172:4-5. "I
 14 mean he was just kind of crazy." Brin 171:15.

15 In February 2005, Mr. Jobs was so "angry about systematic solicitation" of Apple
 16 employees by Google that he placed an "irate call" to Google's Sergey Brin. Ex. 557. Mr. Jobs
 17 was "very agitated" and made "various veiled threats" Ex. 557. Later that week, Mr. Jobs
 18 also called Bill Campbell and Larry Page to express his anger. Exs. 1868 and 1869. Mr. Jobs
 19 spoke with Mr. Brin again: "Basically, he said 'if you hire a single one of these people that means
 20 war'." Ex. 1871. The next day, Mr. Campbell emailed Mr. Jobs: "Eric [Schmidt] told me that he
 21 got directly involved and firmly stopped all efforts to recruit anyone from Apple." Ex. 199. *See*
 22 *also* Brin 61:8-11 ("But it looks -- if I believe this, at least Eric made a -- you know, a -- you
 23 know, at least some kind of -- had a conversation with Bill to relate to Steve to calm him down.");
 24 Schmidt (Google) 60:21-22 ("Steve was unhappy, and Steve's unhappiness absolutely influenced
 25 the change we made in recruiting practice[.]").

26 Apple's head of Human Resources, Danielle Lambert, soon announced the reciprocal
 27 deal: "Please add Google to your 'hands-off' list. We recently agreed not to recruit from one
 28 another so if you hear of any recruiting they are doing against us, please be sure to let me know.

1 Please also be sure to honor our side of the deal.” Ex. 563. *See also* Flynn (Google and Apple)
 2 76:6-79:16. Thereafter, and until the DOJ investigation, Google remained on Apple’s “Do Not
 3 Call” list, and Apple remained on Google’s. Patrick Flynn, a senior recruiter who worked for
 4 both companies during the conspiracy period, confirmed that the two “Do Not Call” lists worked
 5 the same way. Flynn 110:18-112:23.

6 Defendants’ other anti-solicitation agreements resulted from these same efforts. Only
 7 three months after Mr. Jobs bullied Google into agreeing to eliminate “systematic solicitation,” he
 8 persuaded Adobe’s CEO, Bruce Chizen, to enter an identical agreement, largely by threatening to
 9 have Apple solicit “any Adobe employee who is not a Sr. Director or VP.” Ex. 223; *see also*
 10 Chizen 182:1-2 (“All I wanted was to placate Steve.”). Google’s senior executives told Paul
 11 Otellini, Google Director and Intel CEO, about Google’s anti-solicitation restrictions regarding
 12 Apple. Brin 74:15 (“I’m sure we would have mentioned it.”); Schmidt 126:10-11 (“I’m sure I
 13 spoke with Paul about this at some point.”). Mr. Otellini secured the same deal for Intel. Ex. 202
 14 (“We have a handshake ‘no recruit’ between eric and myself. I would not like this broadly
 15 known.”); Ex. 651 (“Can you pls reinforce the no recruiting agreement? I would appreciate it.”).
 16 After Mr. Campbell (Chairman of Intuit, Co-Lead Director of Apple, and “coach” to Eric Schmidt
 17 and Steve Jobs) helped Mr. Jobs bring Google on board, Mr. Campbell “requested that Intuit be
 18 added fully to the Do Not Call list.” Ex. 597. Google agreed to Mr. Campbell’s request. Ex.
 19 597; Campbell 28:23-29:1 (“Shona Brown was the senior VP of business operations, which
 20 included human resources, and I asked her not to cold-call Intuit, and she said okay.”).⁵

21 In the middle of Defendants’ conspiracy, on June 28, 2007, Steve Jobs held a town hall
 22 meeting with Apple employees. An employee expressed concern that other companies paid more
 23 than Apple, and asked “if there’s anything we can do.” 231APPLE133899, at ‘905. Steve Jobs
 24 responded: “I think we pay really competitively and when we hire people, we rarely lose people
 25

26 ⁵ Shortly after Steve Jobs entered into an anti-solicitation agreement with Google, eBay’s Meg
 27 Whitman called Mr. Schmidt “to talk about Google’s hiring practices.” Ex. 872. As Mr. Schmidt
 28 told Google’s senior executives and Bill Campbell at the time, Ms. Whitman said: “Google is the
 talk of the valley because [you] **are driving up salaries across the board.**” Ex. 872 (emphasis
 added). *See also* Schmidt 138:15-144:10.

1 to competitors that we go after, so I don't really know, Michael. All I can say is you should talk
 2 to your manager about it and ask him why he doesn't think you are worth more money. [laughter]
 3 Alright, any other questions?" 231APPLE133899 at '905.

4 Later, a growing Facebook placed the same competitive pressure on Google that Google
 5 once placed on others. Rosenberg 117:17-18 ("relative to large, established companies in the
 6 Valley, yes, in many ways, that analogy is correct."). Google viewed the situation between the
 7 companies as at "Defcon 2." Ex. 666; Rosenberg 126:4-18 ("it's an allusion to the Department of
 8 Defense nuclear status levels, and I'm simply pointing out in a colorful way that the companies
 9 are not happy with each other at the moment. . . . Primarily because of the number of people that
 10 [Facebook] was recruiting from Google, I believe."). With Mr. Campbell's coaching, Google
 11 sought a "truce" with Facebook. Ex. 668; Campbell 142:18-20 ("there was a sense that if we had
 12 a mutual nonrecruiting or, you know, let's say non-cold-calling arrangement, it would be good.");
 13 Ex. 614 ("We may want to consider establishing a mutual "Do Not Call" agreement that specifies
 14 we will not cold-call into each other and only accept unsolicited resumes or applications."); Ex.
 15 616; Rosenberg 126:19-127:23, 128:18-130:5. Facebook refused. Rosenberg 123:2-4 ("I don't
 16 feel that I had a satisfactory response from Sheryl [Sandberg] in achieving my objective," which
 17 was "to reduce the overall number of employees that [Facebook] was hiring from Google."). The
 18 result was exactly what Pixar's Catmull predicted: raising pay structures systematically. As
 19 Google's Prasad Setty explained, Google's decision to increase pay across the board "may put
 20 pressure on pay for coveted technical jobs and increase pay systematically for these jobs." Ex.
 21 472 (emphasis added). Mr. Setty "did all the financial modeling around compensation. So he
 22 would be a true financial expert over compensation." Schmidt 211:8-10. *See also* Schmidt
 23 211:22-23 ("Q: in any event did it have that effect? A: I'm sure it did.") (emphasis added).

24 **B. While the Conspiracy Prohibited Solicitation Broadly, Defendants Focused**
 25 **On Suppressing the Compensation and Mobility of Their Technical**
 26 **Employees**

27 While Defendants' agreements expressly prohibited solicitation of all employees,
 28 Defendants focused substantial effort on eliminating competition for technical and creative
 employees, Order 25, 27-28. The proposed Technical Class consists of Defendants' salaried

1 employees during the period of the agreements, who worked in technical, creative, and research
 2 and development positions. The Class includes software engineers, applications developers,
 3 digital artists, product developers, and other similar positions, the majority of which fell within
 4 technical job families as detailed in Defendants' own compensation data. Leamer Report
 5 (10/1/2012), Appendix B. It excludes non-technical employees (e.g., clerical, finance, etc.).

6 Defendants' hiring, recruiting, and retention efforts focused in significant part on
 7 individuals in the Technical Employee Class. For example, shortly prior to Google's anti-
 8 solicitation agreement with Apple, Google determined that it needed to "dramatically increase the
 9 engineering hiring rate." Ex. 1753. Mr. Schmidt explained: "at the time in question Google was
 10 growing very, very dramatically, and so we were certainly hiring lots of people from the Valley . .
 11 . ." Schmidt 126:18-20. *See also* Eustace (Google) 24:24 [REDACTED]
 12 Rosenberg 73:20-74:2 (Google was growing and hiring rapidly). Google concluded that it
 13 "would need to drain competitors to accomplish this rate of hiring," Ex. 1753. *See also*
 14 231APPLE108086 ("Bottom line is we need to do more targeted recruiting of 'passive'
 15 candidates"); Van Der Voort (Lucasfilm) 50:20-51:15, 59:1-60:5 & Ex. 690 at LUCAS00013723-
 16 26 (discussing Lucasfilm's difficulty recruiting "passive" technical employees, and competition
 17 with other Defendants for those employees); Streeter (Adobe) 110:11-111:2 & Ex. 2800
 18 (identifying, among Adobe's various peers for recruiting purposes, Intuit, Apple, Google and
 19 Intel); Ex. 1306 (Pixar acknowledging the "bay area tech market heating up," helping to explain
 20 "why recruiting has been so hard"); Ex. 1309 (Pixar creating "Tools Software Engineering
 21 leveling matrix" to consistently address software engineering competition); Ex. 173 at p. 4
 22 ("Offers are most frequently declined by technical and senior level candidates"); GOOG-HIGH
 23 TEC-00024150 (Google 2006 Sourcing Diagnostic, at '152: "Passive Sourcing will play an
 24 increasingly large role in recruiting as we move forward as a company"; at '183: "hiring gap"
 25 largest for engineering positions.); Rosenberg 27:19-32:7 (recruiting employees superior than
 26 relying on applications, because "the people who apply, on average, aren't as good.").

27 Growing competition for technical employees gave rise to the agreements in the first
 28 place, and Defendants' enforcement efforts frequently focused on solicitation of technical

1 employees. Mr. Jobs “believed that you should not be hiring each others’ [sic], you know,
 2 technical people” Schmidt 169:20-23. *See also* Lucas 52:9-10 (“You know, mostly the --
 3 mostly I’m focusing on the digital people.”), 151:11-23 (the employees who were “highly
 4 competitive and/or critical to achieving Lucas’ business objectives” were those in creative and
 5 technical positions). As between Pixar and Apple: “The key is to stay away from the engineers.”
 6 Ex. 420. Mr. Jobs’ irate calls to Google’s Sergey Brin were in response to Google’s “systematic
 7 solicitation” of Apple technical employees. *See also* Brin 80:21-22 (“we’re thinking about
 8 typically technical or notable positions. I don’t know that -- I don’t know if this, like,
 9 contemplated the -- whatever, janitors or something.”), 178:21-22 (“I mean I think there are
 10 certainly, you know, technical talent we care about.”); Ex. 187 (Mr. Jobs sought to eliminate
 11 recruiting by Google’s “cell phone software group”); Schmidt 97:11-102:8 and Ex. 192 (Mr. Jobs
 12 policed solicitation by the “Google.com Engineering Recruitment team”; Google responded by
 13 terminating its recruiter who violated the agreement and tried to recruit an Apple employee
 14 “within the hour” and made a “public example of this termination with the group.”) and Ex. 250
 15 (Mr. Schmidt forwarded proof of the termination to Mr. Jobs, who forwarded the message to
 16 Apple’s head of HR, Danielle Lambert, adding a “smiley”); Schmidt 102:9-107:6 and Exs. 278,
 17 279, 648, 650, and 653 (Google sought Steve Jobs’ permission prior to making offers to Apple
 18 technical employees, Steve Jobs refused Google’s request, and Google abided by Steve Jobs’
 19 rejection). The same was true for Intuit. Campbell (Intuit) 30:16-22 (“I don’t know where they
 20 would get their names but, you know, go down a list, you know, if they find a list of employees
 21 somewhere, and went A through Z and called everybody that was a mid-level engineer and above,
 22 just to see if they would -- if they could entice them to come over for an interview. And that was
 23 what I objected to.”). Intel’s Paul Otellini emailed Eric Schmidt to “reinforce the no recruiting
 24 agreement” in response to Google’s efforts to solicit Intel technical employees. Ex. 651.

25 These technical employees are the individuals centrally impacted by Defendants’ unlawful
 26 agreements, and properly treated together as a class. As explained below, the analyses of Dr.
 27 Hallock and Dr. Leamer both address common impact to this Technical Class.

1 **C. Dr. Hallock’s Analysis Shows That Defendants’ Formalized Pay Structures**
2 **and Pay Practices Would Have Transmitted Impact to All Or Nearly All**
3 **Technical Employees**

4 Dr. Kevin Hallock, a leading labor economist and expert on compensation structure and
5 design, answers two questions. First, he analyzes Defendants’ pay systems and compensation
6 practices to determine whether they used formal administrative pay structures, and concludes they
7 do. Second, he analyzes whether suppressing recruiting of Defendants’ workers, including the
8 Technical Class, would have resulted in suppressing their pay, and concludes that it would.
9 “Agreements such as restrictions on cold-calling could be expected to limit and have negative
10 consequences on employee compensation for those workers directly involved and for nearly all
11 employees. Given the formalized pay structures and compensation design in defendant firms
12 nearly all salaried employees could be expected to have pay that would otherwise be higher.”
13 Hallock ¶ 254. Dr. Hallock also examined the proposed Technical Class, and concludes that
14 “although the restrictions could affect all or nearly all workers, there was more concentration and
15 emphasis on the technical class.” *Id.* ¶ 246. For both empirical analyses, Dr. Hallock relies on
16 common evidence consisting of witness testimony and Defendants’ contemporaneous business
17 records.

18 Dr. Hallock begins by explaining compensation system design and features of formal
19 administrative pay systems. “It is noteworthy that an important feature of such systems is that
20 often the internal structure is set in advance of using external compensation information.”
21 Hallock ¶ 11. Jobs throughout the firm are analyzed for similarities and differences, and are
22 placed in a single compensation structure, including pay bands and zones or grades and ranges.
23 *Id.* ¶¶ 13-28. An important feature is to have a set of relative relationships among employees,
24 both in terms of work performed and compensation, whereby every group is evaluated and paid in
25 relationship to all other groups. *Id.* ¶¶ 16-17. For instance, certain employees may be identified
26 as “Engineer I,” “Engineer II,” and so forth, within the same job family. If the employer
27 compensates its employees pursuant to a formal administrative pay system, each title will be
28 valued relative to those above it, and assigned pay ranges accordingly: e.g., the salary range for
“Engineer I” will be lower than the range for “Engineer II.” Groups of titles will similarly be

1 valued relative to each other. *Id.* ¶¶ 10-43.

2 Dr. Hallock next determines that each Defendant used formal and structured
3 administrative pay systems. Hallock ¶¶ 45-109. Defendants organized their employees in terms
4 of job families, grades, levels, and the like, creating company-wide compensation structures.
5 Defendants assigned salary or market pay ranges to those employee categories. *Id.* Defendants
6 routinely investigated whether employees deviated from the ranges. Deviations were identified
7 and dealt with so that, over time, those employees would no longer be outliers (by, for example,
8 decreasing the rate of pay growth over time to match with peers, or by promotion to a new level
9 with a higher range, resulting in a proper fit with a different peer group). *Id.* Defendants
10 standardized their structure in order to compare it to external market data, requiring matching
11 internal titles with external benchmark titles. *Id.* Hallock also examines the evidence regarding
12 internal equity, and finds that there is “substantial evidence that issues of internal equity and pay
13 fairness were important to defendant firms.” *Id.* ¶ 111. Internal equity is important both to
14 creating the initial structure and to manage it to preserve fair compensation across the company.
15 *Id.* ¶ 110. Defendants made substantial and sustained efforts to apply the principles of internal
16 equity to their employees, including ensuring that new hires would be paid fairly in light of their
17 peers; keeping counter-offers confidential, and doing so with a careful eye toward internal equity
18 implications; monitoring pay relationships for equity regularly and remedying deviations; and
19 checking potential peer groups before making offers to candidates. *Id.* ¶¶ 111-181. Dr. Hallock
20 also explains that “pay for performance” does not disprove the existence of internal equity. To
21 the contrary, the two principles are consistent and often complimentary. *Id.* ¶¶ 182-191.

22 Third, Dr. Hallock turns to the restrictions at issue and explains how anti-solicitation
23 agreements can restrict information and pay. “In the instance of this case, the defendant firms
24 limited the market for the employees by restricting cold calling. This clearly led to what would
25 otherwise be higher levels of compensation for some of those in the firms, except that the
26 restrictions were in place.” Hallock ¶ 194. “This situation of lower levels of compensation for
27 some can directly lead to lower levels of others due to the very nature of the formalized pay
28 systems in place at the defendants. This is even more likely among the technical class” *Id.* ¶

195. *See also id.* ¶¶ 192-200. He explains how Defendants’ structured compensation systems would have led to systematic pay effects. *Id.* ¶¶ 201-207. Dr. Hallock then provides several examples of systematic effects at Defendants in response to common market conditions, such as cold calling. These examples include Google’s familiar “Big Bang,” as well as other similar systematic pay decisions at other Defendants. *Id.* ¶¶ 208-223. Dr. Hallock assesses the evidence and explains how, given Defendants’ formalized pay structures and compensation practices, effects of the anti-solicitation agreements would be widely felt. *Id.* ¶¶ 224-236. Finally, Dr. Hallock turns to a specific examination of the proposed Technical Class. He finds it to be a reasonable definition based upon Defendants’ job families for their technical workers. *Id.* ¶¶ 241-244. Dr. Hallock concludes that Defendants’ anti-solicitation agreements would have impacted Defendants employees broadly, and “are predicted to suppress the compensation of all or nearly all members of plaintiffs’ proposed Technical Employee Class, including those with different job titles.” *Id.* ¶ 256. *See also* ¶¶ 241-256.

1. Adobe

Dr. Hallock finds that Adobe used formal and structured compensation systems, and that Adobe followed principles of internal equity. Hallock ¶¶ 46-59, 112-119.

Adobe expected that the distribution of its existing employees’ salaries would [REDACTED] Streeter 57:5-22. Like the other Defendants, Adobe centrally organized—and throughout the Class Period maintained and administered—job and salary structure systems. Every Adobe job position was assigned a job title, and every job title had a corresponding salary range within Adobe’s salary structure; and, like other firms, Adobe pegged that structure as a “percentile” of average market compensation according to survey data from companies such as Radford. Arriada-Keiper 16:16-18, 20:6-16, 214:9-11, 189:13-15; Streeter 46:18-47:3, 55:13-15; Narayan 217:10-17; ADOBE_013837 at ‘3839. Thus, Adobe, like the others, would express how concerned it was about competition for its workers by modulating its entire structure against this reference point; if it faced more competition it could pick a higher percentage. Adobe would then centrally determine the budget for annual salary increases, Arriada-Keiper 20:22-21:2, Streeter 76:14-77:2, and this budget would be passed along to the managers who made the ultimate

1 decisions about salary adjustments, Streeter 291:20-292:23, thereby considerably constraining
 2 their discretion. Far from leaving managers to their own devices, Adobe monitored adherence to
 3 the salary ranges: As Adobe compensation specialist Rosemary Arriada-Keiper testified, “We not
 4 only look at those below, but we look at those above, we look at people where they’re positioned
 5 within the actual range.” Arriada-Keiper 70:2-8; 205:17-206:10. Salary decisions were subject to
 6 the oversight and approval of the manager’s full chain of command, up to and including the CEO,
 7 207:2-208:12, and when Bruce Chizen was CEO he was directly involved in approving
 8 exceptions to Adobe’s salary ranges. Chizen 95:24-96:1. The total budget was approved at the
 9 CEO level. Chizen 95:12-96:1, 98:11-17; Narayan 235:13-236:3.

10 Adobe also paid close attention to internal equity concerns, both in making initial offers
 11 and in adjusting compensation of its employees. Morris 148:13-16; Streeter 90:1-15, 145:1-6.
 12 Adobe sometimes offered less to incoming employees to avoid paying a new hire more than other
 13 individuals with the same job, who might then become upset. Arriada-Keiper 124:21-25.
 14 Internal equity concerns shaped the compensation of newly-incorporated employees in the event
 15 of an acquisition. Streeter 92:7-93:13.

16 2. Apple

17 Dr. Hallock finds that Apple used formal and structured compensation systems, and that
 18 Apple followed principles of internal equity. Hallock ¶¶ 60-65, 120-128.

19 Apple employed internal job and salary structures for purposes of organizing and paying
 20 its employees throughout the United States. For each year in the Class Period, Apple categorized
 21 and compensated its workforce according to a discrete set of company-wide job levels assigned to
 22 all salaried employees [REDACTED]

23 [REDACTED]. Brown Decl., Ex. 16 (Burmeister Decl.)
 24 ¶¶ 6, 10 & Ex. B (Dkt. No. 215-4); Burmeister 52:22-53:8. Every salary range comprised a
 25 centrally-established “min,” “mid” and “max.” *See ids.* Changes to Apple’s salary ranges
 26 occurred only in the context of a shifting of the entire salary structure system as a whole.
 27 Burmeister 155:23-156:25; 190:13-191:6 & Ex. 1859; Baja 40:5-10. In his declaration and at
 28 deposition, Apple Senior Director of Compensation, Steven Burmeister, strived to portray

1 Apple's salary ranges as mere reference points managers could consider but need not rely on in
2 making performance-based compensation decisions. *E.g.* Burmeister 55:9-19.

3 Apple's documents and testimony also show that concerns about internal equity
4 permeated its compensation program, motivating the salary ranges that themselves ensured
5 internal equity within its workforce. For instance, Apple's Senior Director of Compensation
6 testified that internal equity—the notion of whether an employee's compensation is “fair based on
7 the individual's contribution relative to the other employees in your group, or across your
8 organization”—inheres in some if not all of the guidelines managers consider in determining
9 starting salaries. Burmeister 61:15-62:3, 63:11-64:2 & Ex. 1856. Apple recruiters testified that
10 internal equity concerns shaped offers to new employees. Burke 42:24-45:14; Baja 43:5-18,
11 44:10-24; Alvarez (Apple) 9:20-30:14; Bechtel 41:4-18, 43:23-44:8. Apple managers also
12 confirmed that fairness concerns constrained their compensation decisions, which were subject to
13 the approval of managers up to the CEO level. Mansfield 37:14-38:9. When in fiscal year 2005
14 Apple rolled out the overall compensation framework that persists in evolved form today, it titled
15 the document “Compensation Framework / Ensuring Global Consistency,” and proposed to set
16 starting, lateral, promotional, and transfer salaries based on the salaries of incumbents in similar
17 positions. Ex. 1856. Finally, Apple constrained manager discretion through company-wide merit
18 increase budgets, Okamoto 133:20-134:8, Mansfield 36:7-11, and the use of [REDACTED], its internal
19 system for tracking employee records and employee performance, which required managers to
20 grade employees at one out of only four levels. Baja 142:10-143:13, 145:10-21, 146:5-23; Fadell
21 52:25-53:9; Mansfield 33:5-23.

22 **3. Google**

23 Dr. Hallock finds that Google used formal and structured compensation systems, and that
24 Google followed principles of internal equity. Hallock ¶¶ 66-69, 129-136. At Google, the
25 “People Ops” group was “responsible for compensation across the company.” Eustace 36:19-24.
26 As Alan Eustace, Senior Vice President of Engineering, explained: “if you're not careful,
27 compensation will drift across different groups and you will end up with inequities across the
28 company and, you know, they're responsible for coming up with a compensation plan which is

1 inclusive of all the different groups in the company.” Eustace 37:24-38:4 (as corrected by errata
 2 sheet). Sergey Brin explained: “I think we care about fairness broadly and certainly with respect
 3 to compensation of our employees, and if there is a perception or reality that some employees are
 4 getting disproportionately higher compensation or, you know, probably the worst thing is if they
 5 are getting disproportionately lower compensation for similar performance, that would work, you
 6 know, against fairness.” Brin 38:18-25. Shona Brown, who built People Ops, stated that “in all
 7 of the elements where [she] led development of [Google’s] pay practices, [she] was always
 8 focused on trying to pay people fairly. Of course.” Brown 21:23-23:12; 67:10-15.

9 People Ops provided guidelines on compensation, by employee levels and bands. Eustace
 10 137:13-15; Brown 24:6-15 (Brown’s purview as the leader of People Ops included the “design
 11 and monitoring and oversight for compensation programs across the company”). Brown testified
 12 that “generally speaking [Google] had different levels for employees,” Brown at 93:24-94:6, and
 13 “if you discussed a specific role [at Google], you could understand that that role was at a specific
 14 level on a certain job ladder.” Brown 94:14-95:4.

15 Throughout the class period, Google established pay ranges to guide employee salaries.
 16 Wagner 49:2-50:10 (testifying that Google’s [REDACTED] salary ranges had generally the “same
 17 structure” as the [REDACTED] salary ranges indicated on Exhibit 1600). Google employees are rarely
 18 paid outside of the salary range. Wagner at 28:19-29:9. Bonuses were determined by “the People
 19 Ops organization and Eric Schmidt directly.” Eustace 137:20-21. Bonus amounts were
 20 calculated by taking “a set of people in like jobs, you calculate the median salary. All those
 21 people, because they’re in like jobs, will have the same bonus target. . . . The bonus calculation
 22 will be based on the median of their salaries rather than on their actual salaries.” Bock 44:12-20.

23 4. Intel

24 Dr. Hallock finds that Intel used formal and structured compensation systems, and that
 25 Intel followed principles of internal equity. Hallock ¶¶ 70-84, 137-158.

26 Intel used job levels to classify all of its employees, as well as salary ranges. McKell 49:8-
 27 10; Murray 45:6-12. Intel’s salary ranges were standardized throughout the company; each range
 28 applied to multiple jobs and most jobs spanned multiple salary grades. McKell at 59:17-20. Intel

1 further broke down its salary ranges into quartiles, and compensation at Intel, like Adobe, follows

2 [REDACTED]
 3 [REDACTED] *Id.* at 62:15-63:22. Intel regularly runs
 4 reports showing the salary range distribution of its employees. *Id.* at 64:13-17. These
 5 distribution reports are shared with the business consultants for each of Intel's business groups.
 6 *Id.* at 64:18-65:6. Intel conducts a yearly evaluation process called "focal" in which each
 7 employee is assigned one out of five rankings. *Id.* at 46:7-20, 47:1-8; Otellini 247:22-248:8.

8 [REDACTED]
 9 [REDACTED] McKell 75:14-20; Murray 179:18-180:3. Overall
 10 merit increase and stock budgets were set company-wide and approved by the CEO and Board.
 11 Otellini 248:18-249:4; Murray 49:9-16.

12 Intel used internal equity "to determine wage rates for new hires and current employees
 13 that correspond to each job's relative value to Intel." McKell 210:22-211:18; Ex. 398. Intel
 14 defines internal equity as "a fairness criterion comparing comparable Intel jobs using education,
 15 experience, and skill level and performance and timing of next review period." Ex. 398 at '5963.
 16 Internal equity considerations shape pay decisions at Intel: Intel uses a tool that generates an
 17 "Internal Equity Report" when making offers to new employees, McKell 213:18-214:4, and Intel
 18 evaluated the impact of new hire activity on internal equity. *Id.* at 228:6-24; 76610DOC004726
 19 at '4747 ("External hires put internal equity pressure on proven long term Intel staff)."

20 **5. Intuit**

21 Dr. Hallock finds that Intuit used formal and structured compensation systems, and that
 22 Intuit followed principles of internal equity. Hallock ¶¶ 85-88, 159-164. Intuit gave
 23 compensation guidelines to managers throughout the company. McNeal 76:10-22; 99:8-18.
 24 Intuit recruiters could not deviate from salary guidelines without express approval. Nguyen
 25 72:17-73:4, 90:15-20, 91:11-92:3. Mason Stubblefield's declaration asserts, "Individual salary
 26 increase determinations are not reviewed for consistency with salaries elsewhere in the company
 27 or otherwise." Decl. ¶ 19. This is false, as Mr. Stubblefield himself explained under
 28 examination. Intuit looks "at data across the different leaders below the senior leader to make

1 sure we had consistency and compliance to budget at an overall level.” Stubblefield 35:17-20.
 2 Intuit applied pay increase guidelines across the company, flagged exceptions, and audited them.
 3 Stubblefield 36:14-37:8. While his declaration says that “Intuit does not use salary bands or
 4 ranges, either for existing employees or new hires” (Decl. ¶ 10), his testimony is to the contrary.
 5 “There are five bands within the company. . . . Each job that we have fits within a band Jobs
 6 fit into levels. . . . And different numbers of levels get used in different job families based on
 7 business needs. But we use that to get some level -- some consistency across the organization. . .
 8 . So when they’re choosing to hire, open a position or promote someone into a role, it gets
 9 grounded in that level first and that gives you access to a set of data.” *Id.* 87:8-89:8; Ex. 1761.

10 Chris Galy’s testimony likewise contradicts the claim that Intuit did not rely on internal
 11 equity considerations that was asserted in the declarations offered by Defendants in opposition to
 12 Plaintiffs’ initial motion and upon which Dr. Murphy relied. Murphy Rep. p. 45, n. 108 (“Intuit
 13 clearly state [*sic*] that it does not use internal equity.”). Galy, Intuit’s head of recruiting, testified
 14 that internal equity is actually “always one of the considerations” in determining pay for a new
 15 hire, Galy at 200:17-18, and Galy always discusses internal equity with the manager requesting
 16 the new hire, Galy at 20:20-203:1. That’s because “You don’t necessarily want to hire one
 17 person and lose ten.” Galy 201:2-3. Galy testified about a specific recent situation in which
 18 bringing in a new person at a higher salary required raising another employee’s salary in order to
 19 preserve internal equity. Galy 194:25-195:22 (“...and so we did an action [pay increase] for
 20 her.”). Indeed, in order to help the “total rewards” team set compensation for the entire company,
 21 Galy surveyed his staff in 2010 specifically about internal equity and received the following
 22 input: “Hiring managers for the most part are reviewing their teams [*sic*] internal equity and we
 23 are adjusting our offers to reflect this.” Galy at 205-211, Ex. 2142.

24 **6. Lucasfilm**

25 Dr. Hallock finds that Lucasfilm used formal and structured compensation systems, and
 26 that Lucasfilm followed principles of internal equity. Hallock ¶¶ 89-97, 165-179. There was a
 27 regular annual process for setting non-executive compensation whereby the “compensation was
 28 pretty much decided by the president of that company,” subject to George Lucas’s approval.

1 Lucas 135:8-136:2. Lucasfilm’s compensation structure had salary ranges for employees who
 2 had similar job titles or job classifications. Lucas 137:22-138:1. The ranges served internal
 3 equity. Lucas 138:3-6 (“I think it was done in the administrative department and HR in
 4 relationship to, you know, trying to keep things even. I mean, you know, in terms of -- make sure
 5 it was fair.”). Lucasfilm, like its co-Defendants, devised and maintained internal job and salary
 6 structures according to which it organized and paid its employees year after year. Van Der Voort
 7 193:25-194:2, 194:12-195:11. Lucasfilm’s compensation structure included common salary
 8 ranges for similar employees. Van Der Voort 200:18-201:5; Lucas 137:22-138:1. Discovery also
 9 has confirmed the rigidity of Lucasfilm’s salary structure and the interconnectedness and co-
 10 movement of its salary ranges, in that shifts in Lucasfilm’s salary ranges occurred in the context
 11 of a shifting of the entire salary structure as a whole. Maupin 40:24-42:3; 94:4-95:8; 163:10-
 12 164:12.

13 There is wide support in Lucasfilm’s documents and deposition testimony confirming that
 14 Lucasfilm adhered to principles of internal equity in its compensation system and practices. For
 15 instance, it was Lucasfilm’s standard practice that all new positions and out-of-cycle
 16 compensation adjustments presented for approval to its compensation committee were to be
 17 accompanied by “Peer Relationship” information regarding how the subject employee’s (or
 18 candidate’s) colleagues inside the company were compensated, and that this factored heavily into
 19 committee decisions. *E.g.*, Ex. 710, 729, 2084, 2092, 2094, 2096; see Condiotti 41:11-42:21 (“ . .
 20 . .[I]n most cases, when we get a comp request . . . it would have the survey data and all of the
 21 internal people that had – were in similar positions.”). It was also a business practice at Lucasfilm
 22 to regularly and proactively review employee salaries to ensure its workforce was within range,
 23 and to implement “Call-Out Equity Adjustments”—individual compensation increases for the
 24 explicit purpose of “align[ing] the employee more appropriately in their salary range . . . [and]
 25 based on how that employee aligns with their internal peer group based on the same set of
 26 criteria.” Maupin 194:10-18 & Ex. 730. Conversely, compensation increases were denied
 27 explicitly on grounds that they would upset internal equity. *E.g.*, Ex. 2100 (“Ugh, there’s just no
 28 way I can justify that level within our current salary structure, it’d be leaping ahead of people

1 with PhDs plus years of strong track record. . . . We may just have to wish him good luck.”);
 2 Ex. 2088 (“We have plenty of people all over finance with more experience and more
 3 responsibility making at or near the salary you are suggesting for [REDACTED] and frankly, giving her
 4 that money will cause all sort of internal equity issues.”).

5 7. Pixar

6 Dr. Hallock finds that Pixar used formal and structured compensation systems, and that
 7 Pixar followed principles of internal equity. Hallock ¶¶ 98-109, 180-181. Pixar made
 8 compensation decisions annually, across the board to all of its employees, on a company-wide
 9 and formulaic basis. Catmull 205:18-212:13; Sheehy 77:2-78:6; Sheehy 124:20-125:25 and Ex.
 10 1308 (salaries “conservative and tightly controlled”). Mr. Catmull was ultimately responsible for
 11 company-wide compensation. Catmull 208:12-12. Like other Defendants, Pixar set pay centrally
 12 through salary ranges. McAdams 29:3-10; Sheehy 50:3-9; Batali 39:23-24. Salary increases
 13 resulted from a merit increase pool for each job group that was centrally determined. Sheehy
 14 188:13-19, 64:16-20, and 75:15-77:3. Sheehy and McAdams were responsible for ensuring that
 15 salaries for each job group remained within their allocated pool. Sheehy at 77:2-78:6. Out of
 16 cycle salary increases were rare and centrally decided by McAdams, Sheehy and a Pixar Vice
 17 President. Sheehy 145:2-146:17, 147:25-148:5 (noting four to six out of cycle salary increases
 18 compared to 900 salaried employees). Like the other Defendants, Pixar applied the principle of
 19 internal equity. *See, e.g.*, Batali 67:15-17 (“if someone feels like they’re being paid more than
 20 someone I know who has more value, it raises a bit of a flag”); Zissimos 71:2-16 (compared
 21 salaries of similar employees to ensure they were not “out of whack”).

22 D. Dr. Leamer Addresses the Court’s Concerns and Confirms That All or 23 Nearly All Members of the Technical Class Would Have Been Impacted

24 The foregoing evidence alone suffices to certify a class. However, Plaintiffs also submit
 25 additional analysis by Professor Leamer addressing this Court’s questions about his prior work:

- 26 • Whether employee compensation moves together over time, and, relatedly, whether the
 27 pattern of the co-movement charts holds true broadly across Defendants’ employees
 28 (Order at 35);

- The Court’s concern that the co-movement charts could be consistent with a non-rigid pay structure (Order at 38); and
- Whether the proposed Technical Class includes large groups of employees who necessarily were not harmed by the agreements (Order at 45).

Dr. Leamer answers each question and reconfirms his “original finding of a somewhat rigid pay structure at each Defendant that would have transmitted the effects of the agreements broadly, including throughout the Technical Class.” Supplemental Report of Edward E. Leamer, Ph.D. (5/10/13) (“Leamer Supp. Rep.”) ¶ 13.

Dr. Leamer first performs a correlation analysis on a job-title-by-job-title basis, specifically analyzing the “movement over time of the average compensation of each title with the average compensation of the firm’s Technical Class.” *Id.* at ¶ 4. These correlations are “computed for *all* titles” for which there is sufficient data, “not just 20,” including all titles for which Dr. Leamer has at least six observations (a statistical threshold), which includes 94% of Class Period employee years. *Id.* He analyzes correlation over time in two dimensions: “correlation of compensation levels and correlations of compensation changes.” *Id.* at ¶ 23. With respect to both, the “vast majority” of Technical Class employee job titles (weighted by number of employee years) correlate positively over time with the compensation of the overall set of Technical Class employees. *See id.* ¶ 32; Figs. 2, 3. To account for titles with insufficient data to run the title-by-title analysis, Dr. Leamer also divides the employee groups into deciles and measures the correlation of each decile to the mean; these exhibit the same positive relationship. *See id.* ¶ 44, Figs. 9, 10. The answers to the Court’s questions of whether the compensation of Defendants’ job titles moves together over time, and whether this holds broadly true, is “yes” to both.

Dr. Leamer next estimates a multiple regression model for each company designed to detect the presence of internal forces acting on class member compensation, as opposed to merely external market forces. *Id.* at ¶¶ 24-29. The model measures the effect on compensation of a number of variables. One is average Technical Class compensation at a particular company; the effect of this variable reflects contemporaneous sharing of compensation effects, i.e. the degree to

1 which gains for the group are shared broadly at the same time. *Id.* at ¶ 25. The next variable
 2 measures the effect of the *previous* year's compensation, showing the degree to which gains in
 3 one year are later shared over time with other members of the Technical Class at the same
 4 company. *Id.* at ¶ 26. Dr. Leamer's model includes variables for the firm's revenue and Silicon
 5 Valley job growth, to allow for the possibility of these alternative explanations. *Id.* at ¶¶ 27-28.
 6 Dr. Leamer estimates the regression on a title-by-title basis for each company for titles with
 7 adequate data. *Id.* at ¶¶ 24, 34-42; *see* Fig. 1 (Intel example), Figs. 6-8 (results). He also
 8 estimates regressions by decile. *Id.* at ¶¶ 45-49, Figs. 11-12. The regressions show that the "vast
 9 majority" of employees were in titles that have a positive sharing relationship within the
 10 company, both with respect to contemporaneous gains and gains shared over time. *Id.* at ¶ 8.

11 This latter result is particularly significant. Dr. Murphy speculated about an "alternative
 12 hypothesis that the level of compensation of Defendant's employees is broadly determined by
 13 competition in a vast labor market for similar employees and that adjustments for unique
 14 circumstances of particular employees are highly individualized." Murphy Rep. ¶ 89, Dkt. 230.
 15 He never supported this hypothesis. This speculation becomes unsupportable when used to
 16 explain why gains for some are shared with others in *a subsequent year*; there is not a sensible
 17 reason that an external force such as increased demand for computers would affect some
 18 employees in one year and the rest in the next, without resort to internal forces such as fairness
 19 concerns. Leamer Supp. Rep. at ¶ 8 ("Furthermore, the sharing of gains over time strongly
 20 indicates the existence of an internal sharing force driving the structure of class member
 21 compensation, rather than only external market forces."). Dr. Leamer also demonstrates that firm
 22 compensation correlates much more strongly internally than with pay at other Defendants; further
 23 reinforcing his conclusion of a somewhat rigid pay structure at each, and undermining Dr.
 24 Murphy's speculation that internal forces and pay structure play no role in setting compensation.
 25 *Id.* at ¶¶ 65-68.

26 All of these analyses do include outliers—job titles that, for whatever reason, do not
 27 positively correlate to the average or do not show sharing over time. The number of outliers is
 28 small and in most cases they involve titles with incomplete data. *Id.* at ¶¶ 12, 50-64. Even for

titles with more data, outlier results could also arise from unusual turnover patterns that changed the composition of the title, causing its average compensation to move unusually. These outliers therefore provide no basis to question the overwhelming evidence in favor of somewhat rigid compensation structures at each Defendant that would have broadly spread the effects of the agreement. *Id.* at ¶ 12. There is also no basis to exclude outliers from the Class. *Id.*

IV. The Court Should Appoint the Named Plaintiffs as Class Representatives

The named Plaintiffs and Class members share an interest in proving that Defendants' conduct violated the antitrust laws and suppressed their compensation, and do not have any conflicts of interest with class members. *See* Shaver Decl. Dkt. 188, Ex. 6 (Decl. of Michael Devine ¶ 1), Ex. 7 (Decl. of Mark Fichtner ¶ 1), Ex. 8 (Decl. of Siddharth Hariharan ¶ 1), Ex. 9 (Decl. of Brandon Marshall ¶ 1), and Ex. 10 (Decl. of Daniel Stover ¶ 1). For the same reasons set forth in Plaintiffs' opening papers, the named Plaintiffs satisfy Fed. R. Civ. P. 23(a)(4) and should be appointed Class Representatives.

V. Superiority

Plaintiffs renew their request on this finding, which the Court did not reach previously.

VI. Conclusion

For the foregoing reasons, Plaintiffs respectfully request that the motion be granted.

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